

REMARKS

I. Status of the Claims

The Office Action dated November 7, 2005 has been received and its contents carefully considered. Claims 1-3 and 5 were rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,658,425 to Halman et al. (hereinafter referred to as "Halman"). Claims 1-5 were rejected under 35 U.S.C. §102(e) as being anticipated by United States Patent No. 6,506,680 to Kim et al. (hereinafter referred to as "Kim"). Claim 14 was rejected under 35 U.S.C. §103(a) as being unpatentable over Kim.

By this Reply, independent claims 1 and 14 have been amended to clarify that the invention relates to an etching process. The claims have been amended to explicitly state that which has been implicitly shown in the original claim language. Accordingly, the claims have not been narrowed. Claims 1-5 and 14 are pending in this application.

Reconsideration and withdrawal of the outstanding rejections are respectfully requested in view of the following remarks.

II. Claim Rejections - 35 U.S.C. § 102

Claims 1-3 and 5 were rejected under 35 U.S.C. §102(b) as being anticipated by Halman. Without conceding the propriety of the rejection, independent claim 1 has been amended. It is respectfully submitted that Halman does not teach, *inter alia*, an etching method including "etching an organic target film containing Si formed on the SiO₂ film to the point until the SiO₂ film is exposed, wherein a resist is used as a mask

on said etching target film and the etching process ceases once the SiO₂ is exposed” as recited in claim 1.

Halman discusses using a plasma to etch a multi-layered oxide. . In addition, Halman discloses exposing a silicon oxide layer to an etching gas in an ionized state in a reaction chamber of a plasma generating device. Halman also discloses a plasma comprising CF₄, Ar and N₂ to etch a multi-layered oxide. However, Halman shows a multi-layer oxide film structure that includes a TEOS oxide film and a BPSG oxide film is etched until the TiSi_x layer 4 at the base is exposed which is beyond the SiO₂ layers 5 and 8. (For example, see col. 4, lines 15-45 and FIG. 1 of Halman). Thus, Halman fails to disclose an etching method including “etching an organic target film containing Si formed on the SiO₂ film to the point until the SiO₂ film is exposed, wherein a resist is used as a mask on said etching target film and the etching process ceases once the SiO₂ is exposed” as recited in claim 1.

For anticipation under 35 U.S.C. §102 the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present (M.P.E.P. 706.02). Since each and every element, as set forth in the claim, is not found either expressly or inherently described as required by the M.P.E.P., Halman cannot be said to anticipate the invention as recited in claim 1. Hence, withdrawal of the rejection is respectfully requested.

Claims 2-5 depend from independent claim 1 and are patentable over the cited prior art for at least the same reasons as is claim 1.

In light of the foregoing arguments, withdrawal of the rejection of claims 1-3 and 5 under 35 U.S.C. §102(b) as being anticipated by Halman is respectfully requested.

Claims 1-5 were rejected under 35 U.S.C. §102(b) as being anticipated by Kim. Without conceding the propriety of the rejection, independent claim 1 has been amended. It is respectfully submitted that Kim does not teach, *inter alia*, an etching method including “etching an organic target film containing Si formed on the SiO₂ film to the point until the SiO₂ film is exposed, wherein a resist is used as a mask on said etching target film and the etching process ceases once the SiO₂ is exposed” as recited in claim 1.

Kim discusses a lower metal interconnection layer 100, a lower insulating interlayer or dielectric layer 102 deposited over layer 100, an upper insulating interlayer or dielectric layer 104, where layer 104 may be comprised of SiO₂. (For example, see col. 5, lines 46-65 and FIG. 6). However, Kim discloses etching beyond layer 104 up to at least layer 102. (For example, see col. 6, lines 16-33 and FIGS. 7 & 8). Thus, Kim fails to disclose an etching method including “etching an organic target film containing Si formed on the SiO₂ film to the point until the SiO₂ film is exposed, wherein a resist is used as a mask on said etching target film and the etching process ceases once the SiO₂ is exposed” as recited in claim 1. Hence, withdrawal of the rejection is respectfully requested.

Claims 2-5 depend from independent claim 1 and are patentable over the cited prior art for at least the same reasons as is claim 1.

In light of the foregoing arguments, withdrawal of the rejection of claims 1-5 under 35 U.S.C. §102(b) as being anticipated by Kim is respectfully requested.

III. Claim Rejections - 35 U.S.C. § 103

Claim 14 was rejected under 35 U.S.C. §103(a) as being unpatentable over Kim. Without conceding the propriety of the rejection, independent claim 14 has been amended. It is respectfully submitted that Kim does not teach, *inter alia*, an etching method including “etching an organic target film containing Si formed on the SiO₂ film to the point until the SiO₂ film is exposed, wherein a resist is used as a mask on said etching target film and the etching process ceases once the SiO₂ is exposed” as recited in claim 14.

The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. *MPEP* §2142. To establish a prima facie case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, to modify the references or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art must teach all the claim limitations. *MPEP* §2142. In light of the argument regarding the Kim reference, the Kim reference does not teach or suggest all the claim limitations of the present application.

Applicants respectfully point to the final prong of the test, which states the prior art must teach all the claim limitations. At the very least, the Kim reference does not teach all of the limitations of independent claim 14 because of the arguments set forth regarding the Kim reference in the anticipation section of this response.

As a result, the obviousness rejection is improper and independent claim 14 is allowable. Moreover, Kim does not support a finding of obviousness, since it does not

teach all the elements of the claims. Therefore, Applicants respectfully request that the rejection to claim 14 which is based on Kim, be removed.

In light of the foregoing arguments, withdrawal of the rejection of claim 14 under 35 U.S.C. §103(a) as being obvious over Kim is respectfully requested.

Applicant respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-5 and 14 in condition for allowance. Applicant submits that the proposed amendments of claims 1 and 14 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed explicitly or inherent in the claims implicitly as examined. As such, the claims have not been narrowed. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicant respectfully points out that the final action by the Examiner presented some new arguments as to the application of the art against Applicant's invention. It is respectfully submitted that the entering of the Amendment would allow the Applicant to reply to the final rejections and place the application in condition for allowance.

Finally, applicant submits that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

IV. CONCLUSION

In view of the foregoing remarks, Applicant submits that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicant therefore requests the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims. If, for any reason, the Examiner disagrees, please call the undersigned agent at 202-408-6023 in an effort to resolve any matter still outstanding before issuing another action.

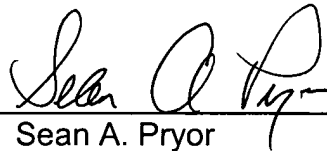
Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: March 1, 2006

By: _____



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